SAP's Business Address Services:

Ensuring the Accuracy of Address Information

Since street addresses and related address information find their way into so many applications within an SAP landscape, users will be ill advised to treat the process of ensuring its accuracy in a casual manner. As the size of an address database increases, efficient address management becomes more and more important. With Central Address Management (CAM), now called Business Address Services (BAS), SAP offers a feature set that provides developers and administrators centralized control over this process.

Central Address Management became generally available with SAP R/3 4.0. Since SAP Web Application Server 6.10 CAM is called Business Address Services (BAS). In this article, the new name will be used, but CAM will also be meant. BAS provides three methods of address checks that enable administrators to check the plausibility of an address and verify addresses against city and street directories as a function within the standard BAS system and/or via third-party supplied solutions (as of SAP R/3 Release 4.6), which BAS support via open interfaces called Business Add-Ins (BadIs).

SAP R/3 4.6B introduced the ADDRESS_CHECK Business Add-In, which third-party vendors are using to integrate specialized tools for automatic postal address checks and validation of addresses. This Business Add-In supports detailed address checks to postal data that is typically provided separately (outside the SAP system). When discrepancies between data input and reference data are found, the third-party tools using the Business Add-In provide changes of the data input according to the reference data. Alternatively, the Business Add-In implementation could also make use of the SAP regional data tables. This seems to be convenient only if the SAP Regional Structure is not activated for the corresponding country.

The new ADDRESS_SEARCH Business Add-In, also introduced in SAP R/3 4.6B, supports applications that perform duplicate checking and error-tolerant searches. The duplicate checking is available for Customer master, Vendor master, and SAP Business Partner data.

Added functionality

Let's look at a couple of situations where the ADDRESS_CHECK BAdI comes into play. In the first scenario, suppose a user — let's call her Susan — is creating a new business partner within the SAP System. If Susan enters a city name that exists twice in the country, she will be presented with a pop-up. This behaviour is supplied courtesy of Paricon, an SAP Development Partner that specializes in interfacing to third-party tools, in this case Uniserv address tools. Their tool which has been certified by SAP, actually goes one step further. Cities with names similar to the one typed in are also shown, sorted by the quality of fit. The postal codes of the cities are also listed. This is the type of added functionality at which third party-tools complement the BAS.

Now, let's suppose that Susan needs to know a business partner's street address. If Susan is creating a customer's general data, but can remember only part of the street name, she can type just this fragment and the system will provide her with a list of street names for the chosen city. These suggestions are grouped by their quality of fit, too. In both cases, Paricon has done the integration work via the BAdI. The administrator's job is simply to import the implementation of the BAdI ADDRESS_CHECK.

Error-tolerant searches

Let's turn the attention now to the ADDRESS_SEARCH BAdI, which supports duplicate checking and error-tolerant search. Let's assume that Susan, who works in her organization's call center, needs to search for an existing customer or vendor within BAS because a customer has called in and does not know his customer number. Integrated via the ADDRESS_SEARCH BAdI, there are several third-party tools that support what we call „error-tolerant" search and wildcard search of address information.

Within the context of an address management component, this capability is extremely useful. Susan can now find business partners, for example, even if the pieces of information that are available to her are incomplete or partly wrong. The benefit this can provide when trying to identify customers, vendors, or prospects, is obvious.

To make use of these functions, the administrator simply has to import implementations of these three interfaces:

- The Business Add-In ADDRESS_SEARCH
- The Business Add-In ADDRESS_UPDATE,

which is a prerequisite of the search functionality used in ADDRESS_SEARCH.

- The report /PARTNER/RSADRINI, which performs the initial setup of search index (this report calls the standard function module ADDR_EXTRACT_FOR_DUPL_INDEX).

All of these implementations have to come via a third-party tool.

In SAP R/3 4.0 and 4.5, direct searches are made without the help of the ADDRESS_SEARCH interface. A selection request is sent from an application to BAS. BAS send it to the database, which generates a hit list, and in turn is redirected, via BAS, to the application. Error-tolerant searches, because they use the SAP R/3 4.6 BAdI ADDRESS_SEARCH, operate a bit differently. Here, a selection request from an application is sent via BAS to the third-party tool. The third-party tool sends the request to an index (this is why the administrator needs to set up the report /PARTNER/RSADRINI and the BAdI ADDRESS_UPDATE), which generates a hit list that is redirected to BAS.

To provide the data for this index BAS send data via the ADDR_EXTRACT_FOR_DUPL_INDEX function module to the third-party tool, which writes data to the index. The index is the place where the system checks for duplicates. In the case of an update, BAS update their own database tables, and send another update via the BAdI ADDRESS_UPDATE to the third-party tool that directs it to the index.

Duplicate checking

The addition of duplicate checking is significant. When address information is collected without this capability, the likelihood of disturbing and costly duplicates of business partners is very high. Once again, examples that highlight how this is of benefit to users might be helpful. Let's say that Susan tries to create a business partner entry. If a business partner with a similar name, street, and city already exists, a pop-up informs her about this fact. She can choose to make the entry anyway, select the duplicate, or cancel the action. The postal check is actually done before searching for duplicates. In this example, Susan was able to start with an incomplete address on the first input screen, and then choose the street. The exact postal code was then automatically determined from the street.

Now let's suppose that Susan knows a customer's name, but not how it's spelled. She can choose "Rough Search" (or "Fuzzy Search" in other applications) as a search option and enter her best guess in the search help. The system will then inform her of all customer names that are similar to the one she entered. The results of this search are sorted by their quality of fit.

Let me end this discussion with a few remarks concerning duplicate-checking features in the SAP Business Partner:

- The duplicate check helps to avoid duplicates in the system during creation of address data. Once duplicates are in the system the user can not get rid of them easily because there will be business processes using both of the duplicates. The SAP Business Partner in mySAP Customer Relationship Management 3.0 provides a solution for this case. Details are available at the SAP Service Marketplace (http://service.sap.com/crm-bp) presentation SAP Business Partner in CRM 3.0 – Cleansing and Archiving.
- Duplicate check functionality for contact persons is currently in the works.
- The addition of indexing and searching for non-address fields of the SAP Business Partner, for example, birth date, social security ID, and so on, is in planning.

Further information

Many hints regarding the BAS and CAM can be found in the SAP release notes. There are BAS release notes for SAP R/3 4.0A, 4.5A and 4.6B. BAS release notes are available for SAP R/3 4.0A, 4.5A, and 4.6B by choosing "Help -> Release notes" in the menu, then choosing "Complete list" from Release 4.0.
Lots of information regarding SAP's address management including documentation, presentations, e-learning, as well as information regarding certified third-party tools, vendors, and links to the SAP partner program are available on SAP Service Marketplace (http://service.sap.com/bas).

Conclusion

Good quality of address data is a considerable asset for every company, but for those who have to contend with large address databases, the stakes are even higher. And contact information is not restricted to simply an address. BAS enable users to store phone and fax information, e-mail addresses, and so on. It also supports international address requirements so that they can tailor print output according to international mail standards and/or multiple address formats. Because of the centralized management of addresses, both checks and updates can be performed from a single point within the SAP system.

With this much functionality, BAS offer the opportunity to guarantee excellent data quality, even for the largest of databases. Users can start with the simple plausibility check, then work their way up to leveraging sophisticated and highly specialized third-party tools.

Additional Information

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